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Marlene H. Dortch, Secretary
Federal Communications Commission
445 12th Street, SW
Washington, DC 20554

Re: **Wireless Internet Service Providers Association**
GN Docket No. 17-258
Written Ex Parte Presentation

Dear Ms. Dortch:

Once again in this proceeding, AT&T Services, Inc. ("AT&T") has attempted to mislead the Commission into believing that licensing Priority Access Licenses ("PALs") by Census Tracts poses "practical deployment difficulties."[1] Once again, the Wireless Internet Service Providers Association ("WISPA") is compelled to set AT&T – and the record – straight.[2] Relying on AT&T's strained reading of the Commission's Citizens Broadband Radio Service ("CBRS") rules as the basis for auctioning larger PAL areas would allow false pretenses to impermissibly reset carefully crafted technical flexibility. The effect of "wrong-sizing" PAL areas will effectively deny small providers of fixed broadband service the ability to participate meaningfully in PAL auctions, forcing them into shared, non-protected General Authorized Access ("GAA") spectrum. While that outcome may favor AT&T and other large entities, it would drive investment and deployment away from rural areas where millions of Americans lack fixed broadband service.

A primary source of AT&T's purported fears about the existing Census Tract-based PAL system is the chance that the Spectrum Access System ("SAS") would assign AT&T different frequencies in different locations. This leads AT&T to request two dramatic changes in the rules. One is to increase the size of the PAL area itself from Census Tracts to Metropolitan Statistical Areas ("MSAs") and counties.[3] This proposal is ostensibly intended to reduce the number of

[1] *See* Letter from Stacey G. Black, AT&T, to Marlene H. Dortch, FCC Secretary, GN Docket No. 17-258 (dated Apr. 26, 2018) ("AT&T April 26 Letter"), at 1. *See also* Letter from Stacey G. Black, AT&T, to Marlene H. Dortch, FCC Secretary, GN Docket No. 17-258 (dated Apr. 5, 2018).
[2] *See* Letter from Stephen E. Coran, WISPA Counsel, to Marlene H. Dortch, FCC Secretary, GN Docket No. 17-258 (dated Apr. 23, 2018).
[3] *See* AT&T April 26 Letter at 5.

PAL boundaries that AT&T falsely asserts will interfere with coverage. The second proposed rule change would assign static channels at auction, so that PAL holders will only be assigned to different channels by the SAS when required for transient protection of incumbents.[4] Both of these changes are unnecessary in order to achieve AT&T's apparent objective of providing seamless coverage across a metropolitan area, assuming it were to purchase a set of contiguous tract PALs. Each of these specious arguments is addressed in turn.

AT&T agrees with WISPA that Section 95.21(b)(1)(i) requires an SAS to "assign geographically contiguous PALs held by the same Priority Access Licensee to the same channels in each geographic area, ***to the extent feasible***."[5] But it incorrectly claims that "WISPA then ignores the possibility that assigning a Priority Access Licensee the same channels in each geographic area may not, in fact, be 'feasible.'"[6] Feasibility is generally based on the availability of channels that are not encumbered by Incumbent users, who take precedence over PALs. This applies equally *within* as *between* PAL areas. If an Incumbent makes a channel available in one part of a PAL area but not another, then the PAL will have to shift its frequency in that part of the PAL area, whether the area is a Census Tract or a much larger area.

Using the Los Angeles MSA as an example, an area along the Pacific Coast could potentially be impacted by the activation of a Dynamic Protection Area ("DPA"). Detection of radar from a Navy ship there could thus force a CBSD near the coast onto a different channel. But the rural community of Barstow is sufficiently far enough away that it would not be impacted by that DPA, so its frequency range would not change. In this respect, the size of the PAL area is irrelevant, so AT&T's claims are unfounded.

Absent the presence of Incumbents or an unforeseen or unlikely circumstance, then, the SAS is expected to provide a given PAL holder with the same frequency range within a single PAL and across a multiple-PAL contiguous PAL area – that is the only reasonable way in which the term "feasibility" can be interpreted. The boundary between PALs belonging to a single holder is essentially transparent to the SAS. A group of PAL CBSDs whose -96 dBm contours, as computed by the SAS using the standard PAL propagation model, overlap will be included on a PAL Protection Area ("PPA") Cluster List, and their PPAs will be merged into a single larger PPA.

Within a PAL area, the "steady state" channel (i.e., absent temporary reassignment) is defined to be essentially stable in the relevant standard. Wireless Innovation Forum standard WINNF-TS-0112-V.1.4.1 Requirements ("WInnForum Requirements") describe how the SAS and CBSDs should implement the relevant rules:

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[4] *See id.* at 3.
[5] *Id.* at 1 (emphasis in original).
[6] *Id.*

> PAL Channel Assignment Planning: At the conclusion of the auction and prior to PAL use commencing, and at the times requested by the Commission, SAS Administrators shall cooperate to apply appropriate protocols to allocate and to assign "steady-state" frequencies to PAL Licensees to meet FCC requirements 96.11 (a)(3), 96.13, 96.31, 96.25(b)(1)(i), and 96.25(b)(2)(i), as well as meeting incumbent protection requirements. [Requirement R2-SPU-10]
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> PAL Steady State Channel Assignment: A SAS shall assign the "steady-state" channels designated per R2-SPU-10 to all CBSDs included in the user's PPA Cluster List as defined by the PPA and the governing PAL held by that licensee. [Requirement R2-SPU-04]

This is extended, as we have pointed out, across contiguous PALs by Section 96.59(b), which states that:

> Consistent with the requirements of §96.25, an SAS shall assign geographically contiguous PALs held by the same Priority Access Licensee to the same channels in each geographic area, where feasible. The SAS shall also assign multiple channels held by the same Priority Access Licensee to contiguous frequencies within the same License Area, where feasible.

The WInnForum Requirements make clear that the Cluster List referred to above may span PAL boundaries, so that a PAL area as managed by the SAS is not bounded at any point by a license boundary, irrespective of its location or the size of the license area, but by the boundary of the set of contiguous PALs:

> *Cluster List:* The set of CBSDs, identified by their CBSD-IDs, that define a PPA. The PAL Holder provides this Cluster List to the Managing SAS. These are the CBSDs that provide service and coverage within the claimed PPA. [WINNF-TS-0112-V1.4.1, Section 2.1 Wireless Innovation Forum Definitions]

That the Cluster List and PPA extend beyond a tract boundary is confirmed by this WInnForum Requirement:

> PPA Tied Back to PAL: The PPA-ID shall be tied back to the parent PAL-ID(s) such that if any parent PAL expires or is revoked then the derived PPA(s) shall also expire. If a 'child' PPA has more than one 'parent' PAL, then if any (one) parent PAL expires, then the whole PPA (the whole Cluster List *that spans more than one PAL*) shall also expire. [R2-SPU-08, emphasis added]

And when it is necessary to reassign temporarily a PAL to a different frequency, the WInnForum Requirement explains that such temporary reassignment is without regard to the individual PAL license area:

> Temporary PAL Channel Reassignment: According to 96.25(b)(1)(i) and 96.25(b)(2)(i), and to the extent necessary to protect Incumbent Users or if necessary to perform its required functions under Part 96 subpart F, SAS may temporarily reassign individual PALs (and their associated PPAs and CBSDs) held by the same licensee to channels different than the "steady-state" channels assigned per R2-SPU-10. [R1-SPU-05]

In other words, a PPA crosses PAL boundaries, steady state frequencies are assigned uniformly across PAL boundaries, and PAL frequencies are reassigned temporarily only as required. If AT&T is unsure that the rules accommodate these facts, the solution is not to disingenuously assert that a rule change is necessary, but to seek clarity from the Commission.

AT&T then tries to sow fear, uncertainty and doubt by denigrating the SAS community's ability to conform to WInnForum Requirements that they helped to write: "At present, the SAS coordinators are not even working on a channel assignment algorithm that would be capable of assigning the same channel to every contiguous PAL in a region. And there is good reason to believe that such an algorithm would be exceptionally difficult to create."[7] Inasmuch as the requirement is that a PAL area be treated the same whether it is created out of one or many PALs, this issue is not even germane. But it is also unlikely that the SAS community would have trouble meeting these requirements, which seem relatively trivial compared to what must be done to protect Incumbents. As noted above, initial PAL frequency coordination is expected to take place after the auction and before the PPAs go into effect, so in any case there is considerable time for this to be completed.

AT&T in fact points out one of the fallacies in its own argument in its next two sentences: "A licensee may desire a common channel across an aggregate PAL Protection Area ('PPA') comprised of a collection of Census Tracts, but that creates a 'daisy chain' problem with other licensees that may desire to create aggregate PPAs that span different regions. Either the SASs will have to use some regional cut-offs or the problem will rapidly become unmanageable."[8] Simply stated, a PPA does not, as AT&T implies, consist of a collection of Census Tracts. Rather, it is a contour defined by the coverage of a set of CBSDs, within a PAL area itself consisting of one or more Census Tracts. A "regional cut-off" will occur *automatically* if there is a gap in the -96 dB contours of CBSDs within a PPA. This gap could occur because of the presence of a natural obstacle (e.g., hill or mountain), if considered by the SAS, or because of a gap in provided coverage, such as might occur when small cells are not deployed in a lower-density area. At that point there is no harm if different frequencies are used in different PPAs within the PAL area, regardless of its size, because it will not be an area of continuous coverage. Surely AT&T's multi-band and multi-frequency handoff arrangements should work as well on CBRS as they do in the 700 MHz, 800 MHz, PCS and AWS bands.

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[7] *Id.*
[8] *Id.*

Exacerbating its flawed analysis, AT&T's example misstates the way Navy radar protection operates. As noted above, Navy radar is protected on a DPA basis.[9] When activated by the Environmental Sensing Capability ("ESC") function, the SAS must temporarily reassign the frequencies that all nearby CBSDs are operating on, away from their Steady State channels and onto unimpacted channels. In many if not most cases, PALs would likely temporarily displace or impact GAA use. If, however, the Navy radar in AT&T's example were replaced by a fixed Incumbent, with a small protection zone, then it is possible that certain channels would be unavailable in some Census Tracts. But, *this happens regardless of whether it is one PAL or many*. Protection of incumbents is handled by the SAS on a CBSD-by-CBSD basis, not a license-area basis. Thus, CBSDs within pictured Census Tracts 11-14 of AT&T's example would be not be allowed on pictured frequency blocks 1-3, whether PAL or GAA, and PAL assignments would be made within the available channels at each location. Census Tract boundaries would be equally irrelevant in any case. Even today, there are many large rural Census Tracts that span far beyond the potential service area of one small cell, and which may have different Incumbent protection requirements in different portions thereof.

AT&T misinterprets WISPA's explanation of why operation up to a PAL area boundary is possible in stating that "[t]he assumption here being that PAL holders could rely on being able to extend their service contours beyond their boundaries because an adjacent market licensee may not have extended their PPA to the boundary."[10] This statement completely ignores the point that WISPA made – that *both* PAL signal *contours* may in fact *overlap* at the boundary, while their PPAs *meet* at the boundary. As discussed above, a PPA boundary itself is derived from the -96 dBm contour of the CBSDs in its Cluster List, while the PPA itself is only protected against GAA interference at an aggregate level of -80 dBm, 16 dB *higher*. (Because there is a PAL on both sides, only one licensee is likely to be present on each side, and thus the lion's share of the aggregate interference level only comes from one party.) Signal contours between -80 and -96 dBm are allowed to overlap. AT&T and the adjacent PAL area's PAL holder can thus engineer their respective PAL CBSDs such that they provide a service level of no less than -96 dBm and no more than -80 dBm along a PAL area boundary (regardless of the size of the PAL), even without an agreement.

AT&T then attempts to refute WISPA's point that agreements *are* possible at a PAL area boundary by returning to the fact that SAS frequency assignments are limited by feasibility: "But, given that AT&T could not assume that even though it holds PALs in two adjacent areas, it would be assigned a common channel"[11] As noted above, the SAS *will* assign the same channel *if* it can, *regardless* of whether the PAL area is composed of one or two PALs. Two "adjacent areas," as AT&T cites, are treated as *one* PAL area by the SAS, but feasibility equally applies within one PAL as well as across a PAL area.

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[9] *See id.* at 2.
[10] *Id.* at 3-4.
[11] *Id.* at 4.

At this point, AT&T moves from the sublime to the ridiculous: "AT&T would not only have to execute a SAB [service area boundary agreement] with every adjacent licensee, it would also have to execute an SAB with every GAA licensee that could possibly be placed in the adjacent market. That is untenable."[12] By what possible means could AT&T claim that its PALs would have to negotiate an agreement with GAA, when it is *absolutely clear* that PALs take precedence over GAA under any and all circumstances? And who would "every GAA licensee" be, when GAA is licensed by rule, by SAS registration, and literally any citizen can purchase a GAA device and register it (subject to installation requirements)? Even when the signal is treated as GAA *outside* of the PPA, as might happen if a CBSD were placed very close to the border of a PAL area (which may consist of multiple PALs), Section 96.35(c) makes clear that "General Authorized Access Users shall have no expectation of interference protection from other General Authorized Access Users operating in accordance with this part." They *certainly* have no expectation of interference protection from PALs either, as AT&T erroneously suggests. There is *no* service area boundary agreement *ever* required among GAA Users, though they may choose to enter into *coexistence* agreements to optimize GAA performance.

AT&T also complains about the process of bidding on multiple licenses: "Without combinatorial bidding—which would be mathematically prohibitive to implement for a Census Tract scheme—licensees cannot guarantee their ability to secure large contiguous footprints."[13] There are no doubt combinatorial schemes that would be prohibitive, but others that would not be. Certainly an organization with AT&T's resources could develop and use tools to keep track of bidding round by round on many licenses, but the Commission could also provide tools to allow combinatorial bidding. This is a non-problem that AT&T and every other bidder will work with, and which will allow each bidder the flexibility to concentrate its PAL resources where it actually plans to build, rather than upon an entire metropolitan area. And, as it should be, there are no "guarantees" in an auction, so AT&T's claimed entitlement to large contiguous geographic areas cannot be countenanced.

In sum, the Commission cannot reasonably rely on AT&T's flawed technical analysis as the basis for adopting larger PAL license sizes. Stripped of rhetoric and properly considered under Commission rules and the WInnForum Requirements, AT&T is simply and severely mistaken in its understanding of how the SAS will protect PAL operations.

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[12] *Id.*
[13] *Id.*

This letter is being filed electronically via the Electronic Comment Filing System in the above-captioned proceeding.

Respectfully submitted,

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